

W5YI

America's Oldest Ham Radio Newsletter **REPORT**

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable.

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Petition for Rulemaking Targets Antenna Restrictions

W. Lee McVey, W6EM of Bradenton, Florida has submitted a *Petition for Rulemaking* to the FCC in which he asks for relief from unreasonably restrictive antenna rules which preclude Amateur Radio communications. He argues that Amateur Radio is not treated the same as other over-the-air communications services that preempt local antenna regulations.

In a petition submitted May 7th, McVey requests an amendment of the rules "...to prohibit, with limited exceptions, any state or local law or regulation, private covenant, contract provision, homeowner's association rule, or similar restriction that impairs the installation, maintenance or use of antennas or antenna structures utilized in the Amateur Radio Service."

Exceptions would include "...only those rules and regulations protecting the public health and safety and the aesthetic maintenance requirements of certain historic preservation districts."

He notes that on October 25, 2000 the Commission adopted rules entitled "*Preemption of Restrictions That Impair a Viewer's Ability to Receive Television Broadcast Signals, Direct Broadcast Satellite Services or Multichannel Multipoint Distribution Services*." This ruling preempted restrictions on the installation of "Over-The-Air Receiving Device (OTARD)" antennas used to receive and transmit two way wireless communications.

The FCC asserted its preemptive authority un-

der Section 303 of the *Communications Act* to facilitate access to fixed, two way wireless services by commercial and residential users. Section 303 is the regulation that lists the overall authority of the FCC including "...prescribing restrictions and conditions, not inconsistent with law, as may be necessary...."

The purpose of the federal preemption was to ensure that competing telecommunications providers were able to provide wireless data and video services to customers in multiple tenant environments and to foster tenant choices.

Amateur radio antennas and the law

Specifically eliminated from the preemption were Amateur Radio antennas and their supporting structures. A footnote specified that the "...definition of fixed wireless signals does not include, among other things, AM radio, FM radio, amateur ('ham') radio, Citizen's Band (CB) radio, and Digital Audio Radio Service (DARS) signals."

FCC said "State and local regulation of the placement of antennas used for ham radio is covered by Section 97.15(b)..." which states authorities must reasonably accommodate Amateur communications and that antenna regulations "...must constitute the minimum practicable regulation to accomplish the state or local authority's legitimate purpose."

"In 1985, the Commission's then Private Radio

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Bureau issued opinion PRB-1 which constitutes what is essentially codified in Section 97.15(b.) This opinion provided only minimal, suggestive preemption of state and local regulations. Furthermore, subsequent petitions for amendment, clarification and extension of PRB-1 to include private covenants, lease restrictions and homeowners' association rules have been unsuccessful."

McVey also believes "...it is not clear from the language [in 97.15(b)] ...what the Commission assumed to be the legitimate purpose of such state or local regulations" and adds that this section "...does not extend to or otherwise enjoin all ...private covenants, lease restrictions, homeowner association rules, etc. from restricting or prohibiting the installation and use of antennas in the Amateur Service."

The OTARD antenna order is unfair

"...on the other hand [the October 25th order on over-the-air-receiving devices] goes much further," McVey said "...providing end users substantial protections and remedies from local, non-governmental antenna restrictions which serve to prevent effective utilization of regulated two-way telecommunications services." He argues that it is illegal to give blanket preemption to one two-way radio service and not others.

"The Fourteenth Amendment to the U.S. Constitution guarantees equal protection under law. By not providing the Amateur Radio Service, the General Mobile Radio Service and other licensed, regulated end-user two-way telecommunication services equivalent preemption protections for antenna placement and resulting effective service utilization, the Commission has written the [OTARD order] contrary to the intent of the Fourteenth Amendment to the United States Constitution."

Lee McVey said that he "...presently is prohibited from Amateur Radio Service operation by virtue of restrictive conditions, covenants and restrictions upon his premises. If the Commission grants the relief requested by this *Petition for Rulemaking*, Petitioner and many others similarly restricted may begin or resume Amateur Radio Service operation."

The FCC acknowledged receipt of the petition on May 10th and has forwarded it to their Mass Media Bureau for evaluation and further action.

REDUCE COMMERCIAL RADIOTELEGRAPH REQUIREMENTS

Lee McVey, W6EM also filed a *Petition for Rulemaking* on June 19th seeking "...to simplify and relax Commercial Radiotelegraph Operator licensing requirements consistent with recent amendments to the Amateur Radio Service." He wants to eliminate the Third Class Commercial Radio telegraph license and the reduce the Morse code proficiency speeds of the First Class Radiotelegraph license to 13 words-per-minute and Second Class R/T

license to 5 wpm.

He justifies his request by stating that effective April 15, 2000 the FCC simplified Amateur Radio Service licensing requirements by reducing the number of license classes from six to three and greatly reduced the code proficiency speed to 5 words-per-minute.

He says that the current Commercial Radiotelegraph Operator license structure consists of three licenses which require four separate telegraphy element examinations ...including separate exams for code groups and text. (Element 1 - 16 wpm code groups, Element 2 - 20 wpm plain language, Element 3 - 20 wpm code groups and Element 4 - 25 wpm plain language.)

McVey incorrectly states that the Commercial Radio Operator rules currently permits all holders of the Amateur Extra Class license to receive credit for Commercial Radiotelegraph elements 1 and 2. Actually that rule was amended on April 6th as part of an *Order denying five Petitions for Reconsideration of the Amateur Radio Service restructuring Report and Order* (WT Docket 98-143.)

One of the housekeeping rules the Commission amended was Section 13.9 to grant Commercial Radiotelegraph element 1 and 2 credit only to Amateur Extra Class operators who had passed the 20 wpm Morse code Element 1C previous to April 15, 2000.

The FCC said "Absent this amendment, an individual who holds an Amateur Extra Class operator license by virtue of passing a 5 wpm telegraphy examination could inadvertently receive credit for the 16 and 20 wpm commercial telegraph examination elements."

McVey states that if the reduced Commercial Radiotelegraph code speed requirements were adopted, all current General Class radio amateurs would qualify for Commercial Radiotelegraph elements 1 and 2, and General, Advanced and Amateur Extra Class licensees who passed Element 1B (13 wpm) and 1C (20 wpm) prior to April 15, 2000 would qualify for all four Commercial Radiotelegraph examinations.

"Adoption of the above recommendations will reduce Commission administrative costs, eliminate inconsistency in Commission radiotelegraph proficiency requirements and serve to promote and encourage additional licenses in the Commercial Radiotelegraph Service," McVey said.

The FCC acknowledged the petition on June 19th and forwarded it to their Wireless Telecommunication Bureau for further evaluation and action.

• **Alan Dixon N3HOE and Robert K. Leef KB6DON** jointly filed a *Petition for Rulemaking* seeking to extend the term of a GMRS (*General Mobile Radio Service*) license from five to ten years "...to establish uniformity with other services." Alternatively, if the five year license term must be maintained, then the petitioners request that the total license fee be reduced to \$25 from its present \$85.

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FCC DECLINES TO CHANGE CB COMMUNICATIONS DISTANCE

On September 19, 2000, Alan Dixon N3HOE (Extra Class, Melbourne, Florida) filed a *Petition for Reconsideration* of a ruling by the FCC's Wireless Telecommunication Bureau denying his petition seeking to abolish the distance over which a CB Radio Service operators may communicate. Current rules now call for a maximum communications distance of 250 kilometers ...a little over 150 miles.

The original petition seeking amendment of CB Rule 13 "*Prohibition of Communications or Attempts to Communicate with Citizens Band Stations More Than 250 Kilometers (155.3 Miles) Away*" was filed by Dixon on November 3, 1999. It was denied when the FCC concluded that the request was inconsistent with the purpose of the CB Radio Service and could fundamentally alter the nature of the service.

Specifically, the FCC said the CB rules "...prohibit long-distance and international communications in order to ensure that the CB Radio Service is used for the purposes for which it was authorized, that is to provide for short-distance personal and business radiocommunications.

The Bureau concluded that if the petition was granted, the CB Radio Service "...would transform from a short-distance voice communications service (where long-distance communications inadvertently can occur) to an examination-free amateur radio-type service, in which long-distance communications would become permissible communications." When the CB Radio Service was authorized, the FCC said its "...express intention [was] not to create a service paralleling the amateur service...."

Dixon asked for reconsideration on the basis that the FCC did not address the special case of emergency communications, and whether there should be a limit on distance of communications where life or safety may be involved.

Dixon also asked whether the Commission ever intended to actually place a limit on distance of communications in situations where safety of life is concerned, and requested that the rules specifically permit emergency communications in excess of 150 miles.

In again denying Dixon's request, the FCC said "...individuals who find themselves in emergency situations are likely to have stations in other radio services, such as amateur, marine, land mobile stations, or cellular or other wireless telephones, available either to them or to another individual close to the emergency location."

On August 1, 2001, the FCC again declined to reverse or revise their conclusion that Dixon's *Petition for Rule Making* was inconsistent with the purpose of the CB Radio Service. Furthermore, the Commission said it had considered the emergency aspect of CB Radio communications when it originally ruled on the petition.

13-cm HAM BAND THREATENED BY COMMERCIAL USERS

On August 9th, the FCC issued a document which looks at examining various frequency bands that could be used to support the introduction of advanced wireless services, including third generation (3G) and future generations of wireless systems.

The bands under consideration are currently used by the Mobile Satellite Service (MSS), the Unlicensed Personal Communications Service (UPCS), the Amateur Radio Service, and the Multipoint Distribution Service. Specifically, the FCC is seeking comment on reallocating spectrum in the 1910-1930 MHz, 1990-2025 MHz, 2150-2160 MHz, 2165-2200 MHz, and 2390-2400 MHz bands for new advanced wireless services.

The 2390 to 2450 MHz band is currently allocated to the Amateur Service on a secondary basis. Most amateur microwave links in this band are paired with frequencies at 2300-2310 MHz. The 13-cm band is also used by amateurs for weak signal, satellite and ATV operations. It was among the first spectrum (1993) to be reallocated to the private sector from the Federal Government reserve. Other 13-cm bands under FCC consideration are located at 1710-1755 MHz, 1755-1850 MHz, 2110-2150 MHz, 2160-2165 MHz and 2500-2690 MHz.

The FCC seeks public comment on the potential for the commercial use of these additional spectrum bands for new advanced wireless services (and for the relocation of incumbent licensees or operators who would be displaced.) They also want to know the potential effect on existing and prospective users of these bands.

In a related action, on August 16th the ARRL filed reply comments opposing AeroAstro's petition to share spectrum with the Amateur Service at 2300 to 2305 MHz. The League does not believe that it is possible for the Amateur Service to share spectrum with AeroAstro's Satellite Enabled Notification System (SENS) position monitoring system.

The League said AeroAstro's petition for a commercial Miscellaneous Wireless Communication Service (MWCS) allocation at 2300 to 2305 MHz not only would impose "preclusive operating conditions" on hams but represents "yet another in the continuing series of encroachments" into amateur allocations between 2300 and 2450 MHz.

The ARRL says that AeroAstro has not shown how radioamateurs and low-power commercial operations can share the band on a co-primary basis without interfering with each other. An interference study prepared by the ARRL Lab predicts "intolerable" interference, especially to weak signals, if the AeroAstro petition were granted.

The League has petitioned to elevate the Amateur Service 2300-2305 MHz allocation from secondary to primary status and requests that no commercial operations be introduced.

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CUTTING EDGE TECHNOLOGY

Ever since the early days of Web retailing, "brick-and-mortar" stores have been fighting to retain their market share. They now think they have the combination. It is called "Customer Relationship Marketing" (or CRM.)

CRM also has been called customer interaction management, technology-enabled relationship management, and multi-channel Web marketing. Basically it is the use of modern databases to link customer purchases made at Main Street stores to online "follow up" selling ...and vice versa.

IBM, a big e-commerce player, unveiled their *MerchantReach* software last month for retailers that want to compile customer information from their stores and Web sites. The software includes more than 200 standard reports and analysis tools.

Up until now, retailers have maintained two database and order entry systems ...one at their traditional retail outlet and another for their online venture. The dual systems meant that neither knew what the other was doing ...and the opportunities for selling related items were lost. CRM puts an end to that.

Multichannel shoppers are bigger spenders. IBM's *MarketReach* software identifies customers who have purchased products online, from a catalog or in their store ...and then helps store clerks to sell accessories and other merchandise. People who shop online tend to be more prosperous ...and customers who shop both at stores and online are inclined to outspend those who just shop at stores.

Among other new marketing efforts, by next year you can expect to receive a promotional "price off" coupon online for related merchandise purchased at a local store. Coordinating online and traditional marketing holds great potential ...not only to sell more merchandise but to build stronger relationships with customers.

Virtual customer support agents use artificial intelligence to solve problems. Customer support is very expensive for technology companies. It is also a source of aggravation for most software and hardware users.

When customers call a company for product support, they are typically put on "hold" - sometimes for 30 minutes or more at a time. And once they do get

through, they frequently find that your problem must be escalated up to the next level ...the wait starts all over again.

One company that thinks they have an answer is **noHold, Inc., of Milpitas, CA.** They have developed an *Instant Support* system that uses automated customer service "bots" (robots) to get customers immediate answers after they respond to an onscreen prompt. There is no wait at all.

Their web-based customer support product offers a natural-language "chat-like" interface that taps into a *Knowledge Platform*, a database that contains a company's information on products and services. The key to the noHold system is called *DynamicDialog*, a powerful artificial intelligence engine that allows users to describe problems in their own words.

NoHold automatically responds to each question, statement or keyword in a format similar to text chat. They simply carry on an intelligent conversation with a virtual technical support person until they get an accurate, relevant solution. Customers can also specify what information they're looking for by selecting from multiple-choice options. Basically, users solve their own problems

By using noHold's interfaces, companies can reduce costs by cutting the number of customer service representatives. According to some analysts, it costs a company about \$33 for each telephone support session and \$10 for each email session, compared with just over a dollar for each Web-based self-service session.

The noHold Solution costs approximately \$25,000 per year. For that you get a hosted server, Internet access, technical support and a customized knowledge base. A one-time set-up fee (about \$10,000) transfers all your product and customer support information (data sheets, manuals, technical notes, etc.) into the *Knowledge Platform* for easy access by the customer. <www.nohold.com>.

EMERGING COMMUNICATIONS

A new breed of disposable cell phones is set to debut shortly.

The "Hop-On Wireless" device is a small (only 2x4x1/2-inch) \$30 cell phone that comes loaded with 60 minutes of pre-paid calling time. It only has two buttons: "Talk" and "End."

You dial a (U.S. only) number by

speaking into the phone (voice-actuated dialing) and when the minutes are used up, it can be recycled or simply discarded. An automated operator verifies the number and connects you.

It requires no conventional cellular commitment, contracts, activation costs, roaming fees or long distance charges. Directory assistance and live operators are available 24 hours a day. You get a small refund if you return the depleted unit for recycling.

At present, the "Hop-on" phone only can make outgoing calls, but not receive them. But this will change and other features will also be added ...such as the ability to access real-time information.)

Plans are to have them available in vending machines at airports. Some will carry advertising on the case to facilitate giving them away as promotional gifts. On the web: <www.hop-on.com/wireless/>.

Venture capitalists are funding various innovative "last mile" broadband links between residential and business users ...and the built out long haul fiber network. One tactic involves sending robots into sewers to fasten fiber to sewer walls and then out into the basements of customers.

CityNet, based in Silver Spring, Maryland, uses state-of-the-art sewer robots manufactured exclusively for them in Zurich, Switzerland. The "Sam" (Sewer Access Module) robots install stainless steel tubes containing fiber lines along the walls of sewer pipes. Initially developed by a Swiss firm to clean sewers, the robots go through tunnels as narrow as eight inches across.

City Net has already lined up \$375 million in financing. The company installs the fiber networks and then leases them to telecommunications companies, Internet and network service providers and others that offer high-speed services.

The firm has already signed license and sewer access agreements with 7 cities in the United States and Europe (including Indianapolis, Albuquerque, Omaha, St. Paul, Scottsdale, Fort Worth and Vienna, Austria) ...and is negotiating agreements with dozens of other cities.

Email Deluge Continues with No End in Sight - According to a new

IDC study titled "E-mail Usage Forecast and Analysis", Email remains the killer app for the Internet. Some 10 billion were sent on an average day last year. By 2005, this will more than triple to a

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staggering 35 billion e-mails sent daily.

Of interest is the fact that web-based browsers now surpass all other ways of accessing e-mail mailboxes in North America.

Email improves quality of life. A new Gallup poll has found that 97 percent of email users say the application has improved their lives. Nine in 10 use email at home and over eight in 10 use it at work. Fifty-three percent use email both at work and at home, and 76 percent have more than one email address.

Almost all work users of email check their email every day and 51 percent check it at least once an hour. Seventy-one percent of home users check email every day, but only 6 percent check it once an hour.

Work users receive an average of 12 email messages every day, and send six. Home users receive an average of 8 messages daily, and send three.

Unsolicited e-mail irks consumers - Eighty-eight percent of users who have registered at websites say they have received irrelevant e-mails, 76 percent have received e-mails of no interest to them, 62 percent received e-mails that were inapplicable, and 54 percent have received e-mails from companies they previously requested not to email them.

Most believe their privacy is invaded when they receive an unsolicited e-mail from a company.

I-mode to hit U.S. next year. American consumers will be able to use the i-mode wireless content service starting next year. I-mode, owned by Japanese telecom company NTT DoCoMo, is extremely popular in Japan. The service currently has 20 million users and 40,000 specially designed content services.

Users of i-mode can send email, catch up on the news, check stock prices, book restaurants, and carry out many other activities using their mobile phones. I-mode phones are more advanced than most other web-enabled mobile phones. They have a color screen, for example.

NTT DoCoMo has partnered with AT&T Wireless and plans to offer its U.S. service in Seattle initially before later rolling it out to the rest of the country.

The partnership also hopes to implement a 3G (third-generation) advanced version by year-end 2002 or early 2003.

COMPUTERS & SOFTWARE

The U.S. Court of Appeals for the District of Columbia rejected Microsoft Corp.'s bid to delay the antitrust case against the company. It paves the way for a new judge to determine what penalties will be imposed for their misconduct in the marketing of their personal computer operating systems in which they hold a monopoly.

It was a victory for the U.S. Justice Department and 18 states suing Microsoft who want the case to proceed quickly so remedies can be imposed and competition assured in the software industry. The appeals court reversed an earlier order to split the company in two.

Microsoft wanted the antitrust case delayed so that it would not interfere with the launching of its new Windows XP operating system software now set for launch October 25th. The new operating system comes bundled with many new features, such as photo imaging and instant messaging which are offered separately by Microsoft's rivals.

The software giant still wants to settle the anti-trust case with the government.

Broadband to boost U.S. economy. So says Criterion Economics in a study funded by Verizon that examined all forms of broadband including DSL, cable modems, satellites, and wireless. The study concludes that the increasing use of broadband services by U.S. Internet users could eventually add up to \$500 billion to the U.S. economy annually.

The study says that consumer use of online home shopping, entertainment, traditional telephone and healthcare services, along with reduced commuting, could add \$200 billion to the economy. This prediction is based on use of broadband by half the U.S. If almost all the U.S. had broadband, the economy could expand by up to \$400 billion.

Furthermore, higher consumer demand for computers, software, and entertainment products could add another \$50 billion to \$100 billion to the economy.

Surprisingly, over 10 percent of all broadband users in the U.S. are located in the New York metropolitan area, according to Nielsen NetRatings. Furthermore, the top five local markets together account for almost a third of all U.S. broadband users. Almost 6 per-

cent are in Los Angeles, 5.8 percent in San Francisco, 4.7 percent in Boston, and 3.6 percent in Seattle.

The report also found that only one third of broadband users do not live in one of the 30 biggest metropolitan areas.

Nielsen NetRatings says this pattern of early adoption in major metropolitan areas mirrors that of the first dial-up users a few years ago.

"Consumer pricing, infrastructure costs, availability, and content will all have to improve for broadband to move on from the early adopter phase," Nielsen said.

INTERNET NEWS

You will shortly be able to view full length movies on your high speed PC. Sony, AOL Time Warner's Warner Bros. Pictures, Metro-Goldwyn-Mayer, Paramount Pictures and Universal Studios plan to offer video-on-demand through a single service in an effort to bring movies into the home through broadband Internet access, the film studios said. The service is expected to be available by the end of 2001 or by early 2002.

Former Netscape browser founder Marc Andreessen is launching "Kontiki", a technology company that hopes to speed up downloads over the Internet with a special emphasis on video files. Potential clients include companies that distribute movies or video games to consumers.

The next version of America Online software will include a new "RadioAtAOL" service and will mark their entry into original Web audio programming. To be included this fall as part of AOL 7.0 software, the radio service will feature a weekly countdown show, audio channels with celebrities' favorite music and programming for children.

On August 9th, the FCC released statistics of its latest data on high speed Internet deployment in the U.S. as of December 31, 2000. A fast Internet connection is necessary for streaming audio and video, as well as large downloads: The rate of growth for the full year was 158%.

High-Speed connections connecting homes and businesses to the Internet

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increased 63% during the second half of 2000 for a total of 7.1 million lines in service. (5.2 million were residential and small business subscribers.)

About 4.3 million of the 7.1 million high-speed lines provided services at speeds of over 200 kilobits per second (kbps) in both directions.

At the end of the year 2000, the presence of high-speed service subscribers was reported in all fifty states, the District of Columbia, Puerto Rico, and the Virgin Islands. Subscribers were reported present in 75% of the nation's zip codes, compared to 56% at the end of 1999.

High-speed asymmetric DSL (ADSL) lines in service increased by 108% during the second half of the year 2000, to 2 million lines. The rate of growth for the full year was 435%.

High-speed Internet connections over coaxial cable systems increased by 57% during the final six months of the year 2000, to a total of 3.6 million. The rate of growth for the full year was 153%.

Although the provision of high-speed lines by satellite and fixed wireless technology represents a small fraction of the total high-speed lines in use, the number of lines grew from 50,000 in December 1999 to 112,000 in December 2000.

High-speed subscribers are reported present in 97% of the most densely populated zip codes. The comparable figure is 45% among zip codes with the lowest population densities, compared to 24% a year earlier.

For zip codes ranked by median family income, high-speed subscribers are reported present in 96% of the top one-tenth of zip codes and in 56% of the bottom one-tenth of zip codes, compared to 42% a year earlier.

The FCC statistics are confirmed by Nielsen NetRatings which reported that the number of U.S. home users with high-speed Internet access increased by nearly 150 percent last year.

"About five million people had high-speed access in December 1999 and this figure had soared to almost 12 million by December 2000. High-speed Internet access includes access via ISDN lines, LANs, cable modems, and DSL connections."

The increasing popularity of streaming media is one of the main reasons that consumers are switching to broadband. Nielsen NetRatings said that the quality, accessibility, and ease-of-use of streaming media must continue to improve if the technol-

ogy is to become as common as broadcast or cable television.

Nielsen NetRatings also said that the increase in U.S. online population is slowing. The number of Internet users in the U.S. grew by 16 percent between July 2000 and July 2001. The level of growth in the twelve months before July 2000 was 41 percent.

NetRatings attributes the slowdown in growth to the overall downturn in the U.S. economy, coupled with slumping PC sales and the fact that most of those who want Internet access now have it.

In total, 58 percent of Americans now have home Internet access, up from 52 percent last year, and 39 percent in 1999.

Web use at four-month low - Worldwide Internet traffic fell to 296.4 million visitors in July, the lowest level in the past four months, according to ComScore Networks Inc. and Diameter, a division of DoubleClick Inc.

Overall traffic by U.S. visitors declined 1.9% from June to July, after a 3% drop from May to June, believed largely to have been driven by the end of college sessions

After months of bickering, the Australian government has banned online casino gambling by its citizens. The *Interactive Gambling Bill 2001*, however, allows casinos to accept bets from foreign customers. Online sports betting and lotteries are being allowed to continue.

Hugh Hefner's Playboy Enterprises (Chicago, IL) has launched two online betting sites already this year: <www.PlayboySportsBook.com> and <www.PlayboyRacingUSA.com>. They even accept credit cards. And <www.PlayboyCasino.com> will be opening shortly. They hope to take advantage of their well known brand name.

Make no mistake about it, gambling over the Internet is big business! The industry even has its own trade show. Last year some 28,000 people from 103 countries showed up at the annual World Gaming Congress and Expo (WGCE). It will be held again Oct. 17-19 at the Sands Expo Center in Las Vegas. Registration is already 27 percent ahead of last year.

According to International Data Corporation (IDC) research re-

port "Distance Learning in Higher Education", ninety percent of U.S. colleges and universities will offer e-learning (courses over the Internet) by 2005.

Toronto-based <www.NakedNews.com> is expanding and holding auditions in the U.S. and soon in Europe and Asia. The Internet site uses news anchors to deliver the news in the buff. "The company is looking for people who are talented, intelligent and charismatic," a spokesperson said.

A Harris Interactive research study entitled "Generation: 2001" reports that U.S. college seniors are the most wired group in the U.S. with virtually 100 percent using the Internet. Nine out of 10 e-mail frequently, only 13 percent send hand-written letters. Four out of five say they go online to get news and information, less than forty percent favor print newspapers or magazines. College seniors use the Internet for an average of 11 hours a week, almost twice as much as they did when they were freshmen. The Harris poll was conducted for Northwestern Mutual, a leading provider of individual life insurance.

According to a survey conducted by Consumer Reports magazine, the world's largest ISPs, AOL and MSN, have the lowest customer satisfaction ratings. The magazine asked U.S. dial-up modem users to rate eight large ISPs on a number of aspects such as reliability, technical support, speed and quality of e-mail service.

MSN came in last in the survey, mainly because its customers were unhappy with its e-mail service, technical support, and reliability. Reliability was also a problem for AOL users, with 60 percent saying they had suffered a dropped connection in the month prior to the survey.

AT&T WorldNet came top of the customer satisfaction ratings, with 78 out of a possible 100 points. BellSouth and Earthlink came joint second with 76 points, followed by Prodigy with 73, Qwest with 70, AOL with 68, CompuServe (owned by AOL) with 67, and MSN with 67.

Asia, the Middle East and Europe are the most likely to censor the Internet. The ruling Taliban movement has banned use of the Internet in Afghanistan (population 25 million) saying they are opposed to obscenity, vulgarity, and anti-Islamic content. The Internet is

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also outlawed in Myanmar (formerly called Burma); population 49 million.

ISPs in China must use Internet filters that block content from many Western, Taiwanese and Hong Kong news sites, and from the websites of human rights groups and that of the banned spiritual movement, the Falun Gong.

ISPs in Russia must route data traffic through law enforcement computer systems so its content can be monitored.

Cuba has about 3,600 legal Internet accounts provided through four government-run servers.

Many of Cuba's legal Internet accounts are owned by government ministries and businesses, joint-venture corporations, and foreigners.

While Internet access is provided by universities, hospitals, and youth clubs, strict limitations are placed on the type of content users can access. Cuba's only cyber-café is not available to Cubans.

The U.S. will not dominate the Internet and tech sector by 2025

according to high tech knowledgeable consumers polled in 19 countries. Only 25 percent of those polled believed the U.S. would continue to dominate the sector. Thirty-seven percent believed Asia-Pacific would be the leading region, while 17 percent favored Europe.

The Asia Pacific region and Europe are set to have an advantage over North America since they have already pioneered the wireless Internet. The United States lags far behind in this area.

Half of the respondents believed most people would access the Internet using a mobile device other than a phone by 2025. Thirteen percent thought wireless phones would be the dominant device. And only 14 percent believe PCs would remain the favored access device.

Number of people across the world on the Internet? Here is the best guess as of December, 2000.

Canada & USA	167.12 million	41.1%
Europe	113.14 million	27.8%
Asia/Pacific	104.88 million	25.8%
Latin America	16.45 million	4.0%
Africa	3.11 million	0.8%
Middle East	2.40 million	0.6%
World Total	407.1 million	100%

WASHINGTON WHISPERS

No new E-taxes for now! A number of state governors want their sales tax system to apply out-of-state Internet purchases. But, at present there's no way to collect the money legally since the U.S. Supreme Court has ruled that states cannot compel out-of-state businesses to collect sales taxes, unless the company in question has a physical presence inside the state that imposes the tax.

Another hurdle is that Congress has imposed a moratorium on Internet-specific sales taxes which expires in October. And it is starting to look like Congress will extend the sales tax ban ...possibly for as long as another five years.

The House Judiciary Committee's Subcommittee on Commercial and Administrative Law is considering two bills to extend the ban on Internet access taxes. One would extend the initial three-year moratorium by another five years; the second would make it permanent.

President George W. Bush is already on record as supporting a permanent ban on Internet access taxes. "Government has got a unique role. The role of government is not to create wealth. The role of government is to create an environment in which entrepreneurs can," Bush said.

On the other hand, another study panel told the Senate Finance Committee to extend the moratorium on Internet access taxes for another year and that Congress should spend that year figuring out the best way for states to collect sales tax on items purchased over the Web.

The panelists agreed that e-commerce reduces state and local sales tax receipts and gives an unfair advantage to strictly Web-based companies over their Main Street "brick-and-mortar" competitors ...some of which also sell online.

Further confusing issue is that there are thousands of separate state and local taxing authorities nationwide. And most have a different tax rate applying to different items.

Forrester Research estimates that states and municipalities will lose nearly \$14 billion in annual sales tax revenues by 2004 if e-commerce is not taxed. The General Accounting Office (Congress' investigative agency) puts the annual loss at between \$2.5 billion and \$20.4 billion by 2003.

Wal-Mart Stores recently spun off their <walmart.com> operation into a separate company which does not have a physical presence in any state. Therefore it does not have to charge sales taxes and

be at a disadvantage to strictly Internet marketers.

Wal-Mart says it is not against sales taxes and believes "...the time has come to put in place a mechanism whereby a level playing field can be created between companies so that all large companies participate in across-the-board collection of existing state and local sales taxes."

The Supreme Court has said that the issue of taxing remote sales should be resolved by Congress. It would require a substantially simplified sales tax system.

In 1998, Congress imposed a three-year ban on all Internet access taxes. The *International Tax Freedom Moratorium Act* expires October 21st if Congress does not extend it. Their "E-Commerce Advisory Commission" adjourned without reaching agreement on how to tax purchases made over the Internet.

There are two telephone scams making the e-mail rounds. Both are the subject of recent FCC Consumer alerts.

The 90# scam works like this.

You receive an e-mail stating that a certain company received a telephone call from an individual identifying himself as an AT&T Service Technician who is supposedly running a test on their telephone lines. The Tech states that to complete the test the individual should touch nine (9), zero (0), pound sign (#) and hang up. Upon contacting the telephone company we learn that by pushing 90# you end up giving the individual that called you access to your telephone line and allows them to place a long distance telephone call, with the charge appearing on your telephone bill. The e-mail ends with "Please 'pass the word'."

This is more of a hoax than a scam. The targets for this scam are actually businesses, hospitals, government agencies and other organizations that use commercial telephone switching equipment called private branch exchanges (PBXs) to handle their calls.

First of all, if a phone company needs to repair a phone, they never call you to assist in the repair. Furthermore, this scam only affects some business PBX systems where you need to dial a "9" to access an outside line and a "0" to request a local operator. But most systems wouldn't know what to do with the "#", so the call to the local operator would be cancelled.

It's conceivable that calling someone on a PBX, and asking the recipient to hookflash, then dial 90#, will give the

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caller an outside dial tone. The caller can now make long distance calls that are charged to the hapless recipient. Again, this only works on some business PBX systems. Dialing 90# on a residential phone will not give a caller access to your phone.

The 809 Scam works like this:

You get an e-mail, voicemail or page telling you to call a phone number with an 809 (or some other three-digit) area code to collect a prize, find out about a sick relative, engage in sex talk, etc. You assume you are making a domestic long distance call - as "809" (and other three-digit area codes involved in this scam) appear to be typical three-digit U.S. area codes.

When you dial the "809" area code, however, you're actually connected to a phone number outside the United States. You don't find out about the higher international call rates until you receive your phone bill.

To minimize the risk of this happening to you, check any area codes before returning calls. And if you do not otherwise make international calls, ask your local phone company to block outgoing international calls on your line.

Also be aware that any three digit area code beginning with 9 is a "pay-per-call" information service. That is, 900 numbers since carry a fee greater than the cost of simply transmitting the call. The fee may be either a per-minute charge or a flat fee per call.

AT&T has more tips for spotting a scam at <http://www.att.com/fraud/tips.html>.

Military might auction their spectrum off to the wireless telecom industry. Republican Reps. Charles Pickering of Mississippi and Fred Upton of Michigan have proposed legislation that would pay the Dept. of Defense, which uses 1700 MHz spectrum designated internationally for 3G (third-generation) wireless uses, to switch to a less valuable frequencies.

3G is an ITU specification for the third generation (analog cellular was the first generation - similar to repeater networks used by amateur radio operators, digital PCS the second) of mobile communications technology. 3G promises increased bandwidth, up to 384 Kbps when a device is stationary or moving at pedestrian speed, 128 Kbps in a car, and 2 Mbps in fixed applications.

3G is expected to include capabilities and features such as enhanced multimedia

(voice, data, video, and remote control) on all popular modes (cellular telephone, e-mail, paging, fax, videoconferencing, and Web browsing).

The DoD spectrum would be auctioned, but instead of going to the U.S. general treasury, the funds would be earmarked for a trust fund designated strictly for military modernization. Recent auctions here and in Europe indicate that the military spectrum could generate between \$50 billion and \$90 billion.

Since the Pentagon estimates it would cost less than \$10 billion to relocate, the GOP leadership views the proposal as a win-win proposition: The mobile phone industry gets the spectrum it needs to harmonize wireless service with the rest of the world and the Pentagon finds a way to finance its weapons upgrade despite the spending squeeze necessitated by the Bush tax cuts.

The big unknown is just how fast can the military relocate their operations to alternate comparable spectrum.

CIA funds company to bring a new generation of high-tech entrepreneurs into the federal fold.

In-Q-Tel is an Arlington, Virginia-based private (not-for-profit) fast-paced company that makes software that allows Web surfers to cloak their identity. The firm is funded with \$84 million taxpayer dollars from the Central Intelligence Agency, a fact it doesn't make any attempt to conceal and has no qualms about publicizing the connection.

They became interested in the firm for their development of technology that the CIA can use to make adapting its spy-mission a little easier. Technology like gathering and organizing intelligence information using search engines that can scour the Internet undetected, in split seconds without leaving an IP fingerprint ...security software to copy-protect sensitive files ...and technology that will organize the unimaginable amount of data collected by the major intelligence arm of the world's most powerful nation. That is something the CIA could never do on its own through the conventional, bureaucracy-bound government procurement process. Most of In-Q-Tel's employees are young.

In-Q-Tel also provides seed money for commercial, unclassified products that address CIA problems. The CIA gets a license to any technology developed with In-Q-Tel funding. The firm only invests in projects that have a dual purpose: com-

mercial applications as well as intelligence uses. More info at: www.in-q-tel.org.

If you're looking for a really interesting job, go to www.cia.gov/cia/employment/operational.htm and check out the job postings under the heading "Clandestine Operations."

The National Aeronautics and Space Administration (NASA) and the Russian space agency have agreed to allow more "space tourists" to visit the orbiting International Space Station.

South African millionaire Mark Shuttleworth, who wants to become the world's next "space tourist," could make his flight onboard a Russian Soyuz "taxi flight" to the International Space Station (ISS) craft as early as April next year or six months later in October. He will blast off from the Baikonur cosmodrome in Kazakhstan with two Russian cosmonauts.

Mark Shuttleworth, a 27 year old South African entrepreneur studied Finance and Information Systems at the University of Cape Town, and founded Thawte Technologies immediately after graduation. After first operating the firm out of his garage, Thawte grew into the largest issuer of digital certificates for secure e-commerce outside of the USA, having certified about 42% of the world's secure e-commerce web servers.

Thawte, a 37 person Internet business, was acquired in February 2000 by VeriSign Inc., the online certification company that controls the ".com" top-level domain, for \$575 million. As a result Mark is now effectively unemployed, but by no means idle. Although no contracts have yet been signed, Shuttleworth has confirmed that he is undergoing a six-month training course at Star City, Russia to become the next paying space tourist.

The Russian news agency, Interfax also announced that an unnamed South African citizen had passed a medical examination and had received access to the Gagarin Cosmonaut Training Centre outside Moscow to train for a space trip.

AMATEUR RADIO

The new Expedition Three Crew arrived at the International Space Station on August 12th commanded by Frank Culbertson (Captain, USN, Ret.) 52, KD5OPQ (Technician Class) from Houston, Texas.

A veteran of two shuttle flights,

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Culbertson has logged over 344 hours in space aboard STS-38 Atlantis (November 15-20, 1990) and STS-51 Discovery (September 12-22, 1993).

Culbertson just received his ham ticket. Without it, there would have been no Amateur Radio activity aboard the ISS during his four month stay. His Russian crewmates, Mission Pilot Vladimir Dezhurov, 39 and Flight Engineer Mikhail Tyurin, 41 do not hold Amateur Radio licenses. The Expedition 3 crew is expected to be active in the ARISS effort.

The Expedition Four crew will follow in mid-December commanded by cosmonaut Yuri Onufrienko, a Russian Air Force colonel and two NASA astronauts, Daniel W. Bursch (Capt., USN) and Carl E. Walz, KC5TIE (Col., USAF).

Yoshi Takeyasu, JA6XKQ of JAMSAT announced that the **SCOPE camera on board the AO-40 (Phase 3D) Amateur satellite successfully captured the first image from orbit on August 7th.** SCOPE is an acronym for "Spacecraft Camera experiment for Observation of Planets and the Earth". The image is published on the JAMSAT SCOPE home page at: <http://www.jamsat.or.jp/scope/index_e.html>. The image shows a crescent "blue" earth.

Looking for an Amateur Radio related site? You will probably find it at: <<http://www.hamfinder.com>>. This new site has nearly 3,000 links to all sorts of ham radio related websites. Check it out.

Lower Morse code speed "now" call **Lin Ireland** - The *Irish Radio Transmitters Society* (IRTS) has requested that Ireland's radio regulatory body ODTR implement CEPT policy and immediately reduce the Morse code proficiency speed to 5 words per minute.

IRTS Secretary, John Corless EI7IQ said it was unacceptable that Ireland has not adopted the revised CEPT *Harmonized Amateur Radio Examination Certificate* provisions that were published on March 7th.

In a letter to ODTR, John EI7IQ said that under current regulations, applicants for Irish Class A licenses must pass a test of 12 wpm. Visitors to Ireland with CEPT Class A licenses gained at the 5wpm speed, cannot operate on HF bands while in the country. He said, "This is an unacceptable situation for the IRTS, as Ireland has proven a very popular holiday destination for amateurs."

The IRTS is also unhappy with the perceived level of service ODTR gives to the Amateur Service, including delays in processing routine matters, stalled new legislation, and the lack of response to requests for a substantial increase in UHF allocation in line with ITU allocations. -- (From <<http://www.wiaviv.org.au/mcw/>>.)

The ARRL is launching an *Amateur Radio Interference Assessment* (ARIA) project to determine the noise levels caused primarily from unlicensed devices in the bands above 400MHz.

Using volunteers the League will assist the FCC's Technological Advisory Council (TAC) to determining whether noise generated by low-power unlicensed Part 15 devices is on the rise and whether it's adversely impacting other services.

ARRL's role will be to measure radio noise in the amateur bands above 400 MHz, with initial emphasis on the band 2400-2450 MHz, where "Bluetooth" and "IEEE 802.11b" protocol wireless local area networks are gaining popularity.

Bluetooth (developed by a consortium of telecom companies) and IEEE 802.11b (developed by the Institute of Electrical and Electronic Engineers) are very short-range (up to 10 meters) radio networking standards that connect home and mobile phones, computers and personal digital assistants (PDAs) together without hard wiring.

Long-term tests starting next year will assess noise trends on the UHF/microwave bands over a period of several years to determine if the situation is staying the same, getting worse or getting better.

ARIA is looking for "qualified and motivated" individuals to participate in the program. Initial volunteers should have receiving equipment and antennas capable of covering the 2400-2450 MHz band in a vehicle, and be able to report results in a timely manner. E-mail: <aria@arrl.org> if you are interested.

FCC Amateur Radio Enforcement

Scott V. Swanson K6PYP (Pacific Palisades, CA) has been sent a warning notice by the FCC concerning the operation of the K6UQ (Pali Amateur Radio Club) repeater of which he is trustee. The FCC notified Swanson that it has been advised by the local (TASMA) coordinating body that the 145.46/14486 MHz repeater pair is coordinated to the Inland Empire Amateur Radio Club of Fontana, CA which operates under call sign W6IER.

The FCC also referred the matter to their Los Angeles Field Office with instructions to cite the K6UQ licensee and control operators for interference to the W6IER repeater. "...forfeitures in such cases are normally in the range of \$7,500," FCC said, adding "Depending on the evidence obtained by the Field, revocation and suspension issues may also be warranted."

Robert J. Kazmierski WE6M (San Mateo, CA) has agreed to a two year suspension of all Amateur Radio operator privileges in order to resolve a complaint against him. On March 14, 2001 the FCC's San Francisco Office monitored Kazmierski deliberately interfering with ongoing communications on 146.550 MHz. If there are no violations, the suspension automatically ends on August 3, 2003.

Alan P. Foucard KF4MIL (Morehead City, NC) has been warned that he has been monitored checking into the "Reseau du Capitaine" net operating on 14.118 MHz on numerous occasions. Foucard was cautioned that the 20 meter band is ...not authorized to you under your Technician Class license." He is contact the FCC within 20 days to discuss the matter.

Dorothy C. Darby, N6ZNC and Jerry P. Darby, Jr. N6UME (Pasadena, CA) have been contacted by the FCC and asked to explain their stockpiling of at least 40 Amateur Club call signs which were issued to them during August and September 1996. The FCC has asked for detailed information about each club ...including complete member lists, meeting times and minutes. The FCC said they will "...cancel all of the club call signs if you have not satisfactorily responded within 30days...."

Derek's Trucking Company (Creedmore, NC) has been warned by the FCC that it has information indicating that they have been operating Amateur Radio transmitting equipment without a license. "Your truck bearing license plate ZB20189 was monitored transmitting on ten meter frequencies on July 19, 2001 near Cary, NC... Retransmissions of Nextel two-way communications were also sent from the truck on ten meter frequencies." The trucking firm was cautioned that continued operation "...will subject you to fine or imprisonment, as well as ...seizure of any non-certified radio transmitting equipment... Monetary forfeitures normally range from \$7,500 - \$10,000."

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ARRL SEEKS 150 kHz HAM BAND AT 60 METERS

The American Radio Relay League has filed a lengthy *Petition for Rulemaking* seeking a narrow (150 kHz wide) secondary domestic allocation for the Amateur Radio Service at 5 MHz.

The League says the 60-meter band allocation "...is urgently needed to fill the ionospheric propagation gap between the propagation paths provided by the current amateur allocations in the band 3500-4000 kHz (80-meter band) and the 7000-7300 kHz (40-meter band).

The Amateur Service currently operates in narrow HF segments at 80 meters (3,500-4,000 kHz), 40 meters (7,000-7,300 kHz), 30 meters (10,100-10,150 kHz), 20 meters (14,000-14,350 kHz), 17 meters (18,068-18,168 kHz), 15 meters (21,000-21,450 kHz), 12 meters (24,890-24,990 kHz), and ten meters (28,000-29,700 kHz.)

In explaining the propagation gap between 80 and 40 meters, the League said "... the HF bands are, with one major exception, spaced such that propagation paths are likely to be available to all parts of the world during all parts of the day. The exception is the segment between the 80-meter band and the 40-meter band. The propagation characteristics of the Amateur HF bands were not the principal basis for the establishment of the allocations. Rather, they were harmonically related so as to preclude harmonic interference to other radio services from early amateur transmitters. That the bands are for the most part spaced adequately for propagation purposes was thus more accident than intent...."

The League pointed out that there are times when an 80 meter frequency is too low and a 40-meter frequency is too high for reliable ionospheric propagation.

The ARRL contends the Amateur Service needs an allocation of 150 kHz usable bandwidth near 5 MHz and that the current occupancy rate at that frequency is sufficiently low enough to permit amateur stations to coexist with current fixed and mobile service users. "Furthermore, there has been a trend for the fixed service to migrate from HF to alternative technologies, such as terrestrial microwaves, satellites and fiber."

The request for a domestic 5 MHz Amateur Service allocation is not new. It was first included in a U.S. National Spectrum Requirements document issued by the U.S. Department of Commerce in March of 1995. The following year, an NTIA document mentioned that "A new amateur service requirement for 500 kHz of shared use around 5000 kHz appears possible at 4945-4995 kHz."

Experimental Operations on 5 MHz

Since early 1999, ARRL has conducted experimental operations on 5 MHz under a Part 5 experimental license grant, WA2XSY. Fifteen amateur stations located throughout the U.S. and the U.S. Virgin Islands compared

communications reliability at 3.8 MHz, 5.2 MHz and 7 MHz. Transmitter power used was 100 watts SSB with horizontal or inverted-vee multiband trap wire dipoles located at heights up to 50 foot. After initial contact was made at 5.2 MHz, the stations would change frequency to 80 and 40 meters and exchange signal strength reports then return to 5.2 MHz to discuss the findings.

Results show that amateur stations can co-exist with incumbent services, and that the propagation paths between the United States and Caribbean countries, where much hurricane disaster relief communications are conducted, are well-served by operation at 5 MHz.

After considering many alternatives for a 5 MHz allocation, the ARRL believes that the 5100-5450 kHz band is the best site for a 150 kHz wide 60 meter domestic Amateur allocation. The League searched the NTIA's Master File and selected the 5250-5400 kHz segment as the optimum location for a secondary basis domestic allocation since it has the fewest assignments in the United States.

The 150 kHz bandwidth is necessary "...to allow Amateurs the flexibility to determine an operating frequency over a sufficiently wide range as to avoid interference to fixed and mobile services."

Conclusions

ARRL determined, both through operations under its experimental WA2XSY license and technical analysis "...that the allocation of a 150 kHz-wide segment at 5250-5400 kHz is both necessary and feasible. It is proposed that a domestic, secondary allocation for the Amateur Service in that band, with adequate protection incorporated in the Part 97 rules for protection of the Fixed service, be proposed immediately.

"There is ample precedent for Amateur operation in a band occupied (in this instance relatively minimally) by Fixed Service licensees, since the Amateur Service has done so successfully in the 10.100-10.150 MHz band for many years now.

"An Amateur Allocation in this band would improve the Amateur Service's already exemplary record of providing emergency communications during natural disasters when even modern communications systems typically fail. HF Amateur stations are a necessary backbone in international disaster relief involving, for example, Caribbean countries, and the proposed allocation would provide seamless propagation path coverage between the United States and Caribbean nations, and the United States' own possessions and commonwealths there."

The petition mentions that there are also currently pending proposals for a band around 5 MHz in Europe. "In the United Kingdom the band 5245-5445 kHz is being studied as a possible candidate for the Amateur Service." The FCC assigned rulemaking number, RM-10209, to the petition. Initial comments are due by Sept. 12, 2001.